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WEITERE INFORMATIONEN OK

Monday, November 18, 2013

European-Asian divergence predates the industrial revolution

Stephen Broadberry describes new estimates of per capita GDP which say that the economic divergence between Western Europe and other civilized parts of the world predates the industrial revolution. (H/T Marginal Revolution). This is more consistent with my own theories (linked below) than the idea that the Great Divergence magically appears from nowhere around the year 1800. Nevertheless I feel compelled to point out shortcomings in these kinds of estimates, on any side of such debates.

There are the usual correctable, but sadly seldom corrected, problems with datasets comparing European economies over historical periods, for example using "Holland", and leaving out, presumably not only the rest of the modern Netherlands, but the entire area of the exceptional Low Country late medieval industry and wealth (Flanders, Brabant, Hainault, etc.), most of which migrated (along with most of the skilled craftsmen and merchants) to the Netherlands during the 16th century wars there. The southern Low Countries, until those wars, were the leading centers of European textile manufacture and probably also had the most labor-productive agriculture.

Worse are these and all other attempts to compared historical European "wealth" or "income" to those of non-European cultures before the era of cheap global precious metals flows (initiated by the exploration explosion) allows comparison of prices. How do you compare the “wealth” or “income” of rice-eating and cotton-wearing Chinese farmer to a milk-drinking, oat-eating, and wool-clad Scottish peasant? It it is neither very useful nor very reliable to try to reduce such cultural and even genetic differences to mere numerical estimates.

So it's no surprise to see such conjectural and subjective estimates subject to major revisions, and I'm sure we'll see many more such revisions, in both directions, in the future. That said, many of the economically important innovations in northwestern Europe long predate not only the industrial revolution, but also the Black Death (Broadberry's new date for the start of the Great Divergence), including the following biological bundle:

(1) heavy dairying

(2) Co-evolution of human lactase persistence and cow milk proteins

(2) delayed marriage

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Nick Szabo

"A premier thinker about history, law and economics, and the lessons they have for security." -- Adam Shostack, Emergent Chaos

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"Like most blogs worth my attention, this blog is updated only infrequently. That is because the authors of blogs worth my attention only post when they have something to say that is true, relevant and not already known by their audience. Most of the human race does not have the skill to know when an idea has these three properties. The skill is particularly rare in the fields of politics and economics, which is why this blog is such a rare and valuable thing." -- Richard Hollerith

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(3) hay

(4) greater use of draft animals

These innovations all long predate the Black Death, except that thereafter this biological divergence, especially in the use of draft animals, accelerated. After a brief interruption the lactase persistent core resumed its thousand-year conversion of draft power from humans and oxen to horses, including super-horses bred to benefit from good fodder crops -- the Shire Horse, Percheron, Belgian, etc., and of course the famous Clydesdale of the beer ads. Draft horses figured prominently in the great expansion of the English coal mines from the 14th to 18th centuries. They both pumped the mines and transported the coal to navigable water. Due to lack of horsepower for pumping and transport, the Chinese use of coal, though already well established by the 13th century visit of Marco Polo, where both mine and consumer were within short human-porter distance to navigable water, failed to grow beyond that limit until the coming of the railroad. Similarly draft horses, alongside the more famous water-mills, played a key role in the early (pre-steam) exponential growth of the English textile industry, the economically dominant feature of the early industrial revolution.

Greater use of draft animals led to higher labor productivity and larger markets for agricultural output, and thus to greater agricultural specialization. Higher labor productivity implies higher per capita income, even if it can't be measured. For civilizations outside Western Europe by contrast, much less use was made of draft animals with the result that these effects were confined to within a dozen or less miles of navigable water.

Contrariwise, northern Europe has always been at a severe ecological disadvantage to warmer climates when it comes to growing rice, cotton, sugar, and most other economically important crops. However these seem not to have had an anti-Malthusian effect in increasing labor productivity -- the increased efficiency of rice in converting solar power to consumable calories, for example, simply led to a greater population rather than a sustained increase in per capita income.

Posted by Nick Szabo at 7:17 PM

6 comments:

Anonymous said...

Nice to see you posting! (Thank god for RSS readers.)

9:01 AM

Contemplationist said...

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The last sentence just describes Malthusian dynamics. The question is, why were the Malthusian constraints not broken out of in non-European civilizations.

7:30 PM

Graham Henry said...

Have you published any books? If not, do you plan on publishing any? I would read just about anything you published.

10:50 PM

Timothy Takemoto said...

There is an interesting book by Francesca Bray, "The Rice Economies: Technology and Development in Asian Societies" that claims that the cooler European climates required the use of animal manure, which lead to dairy farming as a means to manure rather than dairy/beef, and may have lead to more pack animals. Rice producers can use their own faeces, and ash, kitchen scraps to feed their rice paddies. Bray goes on to argue that the cooperation between wheat and dairy farmers, lead to increased specialisation, cooperation and the industrial revolution. This is the opposite of the theory popular in Japan where it is claimed that rice farming promotes cooperation due to the need for communal irrigation. As Bray, and other Japanese writers, point out, many rice farmers have their own little lake, their own paddy, and are completely self-sufficient.

4:45 PM

Steve Sailer said...

Thanks. Great picture of the draft horse. A half decade ago I ran into a lady riding a Clydesdale on the beach: the sheer scale of the beast was remarkable.

The European achievement in animal breeding seems pretty central, but it's seldom referenced. Thanks for all the links -- I'll have to follow up on them.

12:27 AM

Mr.Diego Wang said...

@admin I am the new to comment:

There is an intriguing book by Francesca Bray, "The Rice Economies: Technology and Development in Asian Societies" that claims that the cooler European atmospheres required the utilization of creature excrement, which prompt dairy cultivating as a way to compost as opposed to dairy/hamburger, and may have prompt more pack creatures. Rice makers can utilize their own defecation, and fiery remains, kitchen scraps to bolster their rice paddies. Whinny goes ahead to contend that the participation in the middle of wheat and dairy agriculturists, lead to expanded specialization, collaboration and the modern insurgency. This is the inverse of the hypothesis well known in Japan where it is guaranteed that rice cultivating elevates participation because of the requirement for public watering system.

Regard's
Mr.Diego Wang

3:59 AM

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